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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,653	09/09/2003	Francoise Le Bolzer	PF020108	3654
24498	7590	11/01/2005	EXAMINER DINH, TRINH VO	
THOMSON LICENSING INC. PATENT OPERATIONS PO BOX 5312 PRINCETON, NJ 08543-5312			ART UNIT 2821	PAPER NUMBER

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AKC

**Office Action Summary**

Application No.

10/659,653

Applicant(s)

LE BOLZER ET AL.

Examiner

Trinh Vo Dinh

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on RCE filed 10/14/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is a response to an RCE filed 10/14/2005.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kundu et al (US 6,621,381 B1 of record).

With respect to claim 1, Kundu discloses, in Figs. 15 or 10, dielectric resonator antenna (abstract) comprising a block of dielectric material (1500) of specific permittivity  $\epsilon_r$ , said block having a first face (1502 or 102) intended to be mounted on an earth plane and covered with a first metallic layer (col. 15, lines 30-49 or 106a), wherein at least one second face (the face 1502c or 1503 in Fig. 15, or a front side in Fig. 10a) perpendicular to the first face is covered with a second metallic layer (1502c or 1503 in Fig. 15, col. 15, lines 55-59, or 106 in Fig. 10a) contacting the first metallic layer (col. 15, lines 30-49 or 106a) cover the first face (1502 in Fig. 15 or 102 in Fig. 10), the second metallic layer (1502c, 1503 in Fig. 15 or 106a in Fig. 10b) covering the second face extending over a width less than the width of the second face and over a height less than or equal to the height of the second face.

Respecting claim 2, Kundu discloses, in Figs. 10a, 10b, the second metallic layer (106 in Figs. 10a, 10b) covering the second face being centered with respect to the width of the second face.

With respect to claims 3-5, Kundu discloses, in Fig. 15, the second metallic layer (1503) covering the second face being extended via a third metallic layer (1501, col.5, lines 55-67) covering a third face (the face has layer 1501) parallel to the first face (face of layer 1502), the third metallic layer (1501) covering the third face stretching over a width less than the length of the third face, and the width of the third metallic layer (1501) covering the third face is different from the width of the second metallic layer (1503) covering the second face.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kundu in view of Adachi et al (US Patent 6,198,450 B1).

With respect to claim 6, Kundu discloses a dielectric resonator comprising a block of dielectric material having a first metallic layer which covers the first face of the block and the second metallic layer cover that cover the second face of the block as discussed above in claim 1. However, Kundu does not suggest the dielectric resonator comprising a slot and microstrip. Adachi discloses, in Fig. 25, a slot (115a) provided in a substrate (112) and a microstrip line (114) provided on the substrate opposite to the face forming ground plane (col. 17, line 67)

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crossing the slot (115a). It would have been obvious to one having ordinary skill in the art at the time the invention was made to excite Kundu's dielectric resonator using the feeder circuit as taught by Adachi because using microstrip feeding line for feeding antennas will eliminated an use of coaxial feeder so that the low cost of manufacture will be obtained.

With respect to claims 7-9, Kundu discloses the claimed subjected matters as discussed above in claims 3-5 respectively.


*Inquiry*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Vo Dinh whose telephone number is (571) 272-1821. The examiner can normally be reached on Monday to Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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*Trinh Vo Dinh  
October 31, 2005*